



Office of Management and Budget

Circular No. A-131

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TO THE HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS

SUBJECT: Value Engineering

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1. **Purpose.** This Circular requires Federal Departments and Agencies to use value engineering (VE) as a management tool, where appropriate, to reduce program and acquisition costs.

2. **Supersession Information.** This Circular supersedes and cancels OMB Circular No. A-131, **Value Engineering**, dated January 26, 1988.

3. **Authority.** This Circular is issued pursuant to 31 U.S.C. [[section]]1111.

4. Background. For the purposes of this Circular, value analysis, value management, and value control are considered synonymous with VE. VE is an effective technique for reducing costs, increasing productivity, and improving quality. It can be applied to hardware and software; development, production, and manufacturing; specifications, standards, contract requirements, and other acquisition program documentation; facilities design and construction. It may be successfully introduced at any point in the life-cycle of products, systems, or procedures. VE is a technique directed toward analyzing the functions of an item or process to determine "best value," or the best relationship between worth and cost. In other words, "best value" is represented by an item or process that consistently performs the required basic function and has the lowest total cost. In this context, the application of VE in facilities construction can yield a better value when construction is approached in a manner that incorporates environmentally-sound and energy-efficient practices and materials.

VE originated in the industrial community, and it has spread to the Federal Government due to its potential for yielding a large return on investment. VE has long been recognized as an effective technique to lower the Government's cost while maintaining necessary quality levels. Its most extensive use has been in Federal acquisition programs.

An August 1991 recent audit of VE in the Federal Government by the President's Council on Integrity and Efficiency concluded that more can and should be done by Federal agencies to realize the benefits of VE. Reports issued by the General Accounting Office and agency Inspectors General have also consistently concluded that greater use of this technique would result in additional savings to the Government.

5. Relationship to other management improvement processes. VE is a management tool that can be used alone or with other management techniques and methodologies to improve operations and reduce costs. For example, the total quality management process can include VE and other cost cutting-techniques, such as life-cycle costing, concurrent engineering, and design-to-cost, approaches, by using these techniques as analytical tools in process and product improvement.

VE contributes to the overall management objectives of streamlining operations, improving quality, reducing costs, and can result in the increased use of environmentally-sound and energy-efficient practices and materials. The complementary relationship between VE and other management techniques increases the likelihood that overall management objectives are achieved.

6. Definitions .

a. **Agency.** As used in this Circular, the term "agency" means an Executive department or an independent establishment within the meaning of sections 101 and 104(1), respectively, of Title 5, United States Code.

b. **Life-cycle cost.** The total cost of a system, building, or other product, computed over its useful life. It includes all relevant costs involved in acquiring, owning, operating, maintaining, and disposing of the system or product over a specified period of time, including environmental and energy costs.

c. **Cost savings.** A reduction in actual expenditures below the projected level of costs to achieve a specific objective.

d. **Cost avoidance.** An action taken in the immediate time frame that will decrease costs in the future. For example, an engineering improvement that increases the mean time between failures and thereby decreases operation and maintenance costs is a cost avoidance action.

e. **In-house savings.** Net life-cycle cost savings achieved by in-house agency staff using VE techniques.

f. **Contracted savings.** Net life-cycle cost savings realized by contracting for the performance of a VE study or by a Value Engineering Change Proposal submitted by a contractor.

g. **Total Quality Management (TQM).** A customer-based management philosophy for improving the quality of products and increasing customer satisfaction by restructuring traditional management practices. An integral part of TQM is continuous process improvement, which is achieved by using analytical techniques to determine the causes of problems. The goal is not just to fix problems but to improve processes so that the problems do not recur. Value engineering can be used as an analytical technique in the TQM process.

h. **Value Engineering.** An organized effort directed at analyzing the functions of systems, equipment, facilities, services, and supplies for the purpose of achieving the essential functions at the lowest life-cycle cost consistent with required performance, reliability, quality, and safety. These organized efforts can be performed by both in-house agency personnel and by contractor personnel.

i. **Value Engineering Change Proposal (VECP).** A proposal submitted by a contractor under the VE provisions of the Federal Acquisition Regulations (FAR) that, through a change in a project's plans, designs, or specifications as defined in the contract, would

lower the project's life-cycle cost to the Government.

j. **Value Engineering Proposal (VEP).** An in-house agency-developed proposal, or a proposal developed by a contractor under contract to provide VE services, to provide VE studies for a Government project/program.

7. **Policy.** Federal agencies shall use VE as a management tool, where appropriate, to ensure realistic budgets, identify and remove nonessential capital and operating costs, and improve and maintain optimum quality of program and acquisition functions. Senior management will establish and maintain VE programs, procedures and processes to provide for the aggressive, systematic development and maintenance of the most effective, efficient, and economical and environmentally-sound arrangements for conducting the work of agencies, and to provide a sound basis for identifying and reporting accomplishments.

8. **Agency responsibilities.** To ensure that systemic VE improvements are achieved, agencies shall, at a minimum:

a. Designate a senior management official to monitor and coordinate agency VE efforts.

b. Develop criteria and guidelines for both in-house personnel and contractors to identify programs/projects with the most potential to yield savings from the application of VE techniques. The criteria and guidelines should recognize that the potential savings are greatest during the planning, design, and other early phases of project/program/system/product development. Agency guidelines will include:

1. Measuring the net life-cycle cost savings from value engineering. The net life-cycle cost savings from value engineering is determined by subtracting the Government's cost of performing the value engineering function over the life of the program from the value of the total saving generated by the value engineering function.
2. Dollar amount thresholds for projects/programs requiring the application of VE. The minimum threshold for agency projects and programs which require the application of VE is \$1 million. Lower thresholds may be established at agency discretion for projects having a major impact on agency operations.
3. Criteria for granting waivers to the requirement to conduct VE studies, in accordance with the FAR 48.201(a).
4. Guidance to ensure that the application of VE to construction projects/programs and other projects/programs, will include consideration of environmentally-sound and energy efficient considerations to arrive at environmentally-sound

and energy efficient results.

- c. Assign responsibility to the senior management official designated pursuant to [[section]]8a above, to grant waivers of the requirement to conduct VE studies on certain programs and projects. This responsibility may be delegated to other appropriate officials.
- d. Provide training in VE techniques to agency staff responsible for coordinating and monitoring VE efforts and for staff responsible for developing, reviewing, analyzing, and carrying out VE proposals, change proposals, and evaluations.
- e. Ensure that funds necessary for conducting agency VE efforts are included in annual budget requests to OMB.
- f. Maintain files on projects/programs/systems/products that meet agency criteria for requiring the use of VE techniques. Documentation should include reasons for granting waivers of VE studies on projects/programs which met agency criteria. Reasons for not implementing recommendations made in VE proposals should also be documented.
- g. Adhere to the acquisition requirements of the FAR, including the use of VE clauses set forth in Parts 48 and 52.
- h. Develop annual plans for using VE in the agency. At a minimum, the plans should identify both the in-house and contractor projects, programs, systems, products, etc., to which VE techniques will be applied in the next fiscal year, and the estimated costs of these projects. These projects should be listed by category, as required in the agency's annual report to OMB. VEP's and VECP's should be included under the appropriate category. Annual plans will be made available for OMB review upon request.
- i. Report annually to OMB on VE activities, as outlined below.

9. Reports to OMB. Each agency shall report the Fiscal Year results of using VE annually to OMB, except those agencies whose total budget is under \$10 million or whose total procurement obligations do not exceed \$10 million in a given fiscal year. The reports are due to OMB by December 31st of the calendar year, and should include the current name, address, and telephone number of the agency's VE manager.

The report format is provided in the Attachment.

Part I of the report asks for net life-cycle cost savings achieved through VE. In addition, it requires agencies to show the project/program dollar amount thresholds the agency has established for requiring the use of VE if greater than \$1 million. If thresholds vary by category, show the thresholds for all categories. Savings resulting from VE

proposals and VE change proposals should be included under the appropriate categories.

Part II asks for a description of the top 20 fiscal year VE projects (or all projects if there are fewer than 20). List the projects by title and show the net life-cycle cost savings and quality improvements achieved through application of VE.

Part III requires agencies to submit a detailed schedule of year-by-year cost savings, cost avoidances and cost sharing with contractors for each program/project for which the agency is reporting cost savings or cost avoidances. The aggregate total of all schedules shall equal the totals reported in Part I.A. of the annual report.

10. Inspectors General audits. Two years after the issuance of this revised Circular, Agency Heads shall ask the Inspectors General (IGs) to audit agency value engineering programs to (1) validate the accuracy of agency reported value engineering savings and (2) assess the adequacy of agency value engineering policies, procedures and implementation of this revised Circular. Periodically thereafter, agency IGs shall audit agency reported VE savings as the need arises.

11. Related Guidance. In general, value engineering investments should have positive net present value when discounted with the appropriate interest rate, as described in OMB Circular No. A-94, section 8.c. For detailed guidance on value engineering, refer to the appropriate sections of the Federal Acquisition Regulations.

12. Effective date and Implementation. This Circular takes effect within 30 days of its publication in the **Federal Register**. Heads of departments and agencies are responsible for taking all necessary actions to assure effective implementation of these policies, such as disseminating this Circular to appropriate program and other staff, developing implementation strategies and initiating staff training. Since these policies must be implemented in the Federal Acquisition Regulation (FAR), agencies should not duplicate the development of implementing procurement regulations being undertaken by the Federal Acquisition Regulatory Councils. However, implementation of these policies in the FAR must be accomplished within the time period specified below, with inclusion in agency solicitations and resulting contracts, as appropriate, to occur immediately thereafter.

Pursuant to subsections 6(a) of the Office of Federal Procurement Policy Act, as amended, (41 U.S.C. 401 **et seq.**), the Federal Acquisition Regulatory Councils shall ensure that the policies established herein are incorporated in the FAR within 180 days

from the date this Circular is published in final form in the **Federal Register**. Promulgation of final FAR regulations within that 180 day period shall be considered issuance in a "timely manner" as prescribed in 41 USC 405(b)."

13. **Sunset review.** The policies contained in this Circular will be reviewed by OMB five years from the date of issuance.

14. **Inquiries.** Further information about this Circular may be obtained from the Office of Management and Budget (OMB), 725 17th Street, NW, Washington, DC 20503, Telephone (202) 395-6803.

Leon Panetta
Director

Attachment (Annual Agency Report Format)

This OMB Circular is available at:

<http://www.whitehouse.gov/omb/circulars/a131/a131.html>